

*Droughts*.—Wellington, Kan., 30th, streams and springs drying up. Mendon, Mass., 30th, many wells dry. Westborough, Mass., 30th, brooks, springs and wells very low. Antrim, N. H., streams unusually low.

*Snow from Cloudless Sky*.—Lawrence, Kan., 27th. New Ulm, Minn., 28th. Santa Fe, 5th.

### RELATIVE HUMIDITY.

The percentage of mean relative humidity for the month ranges as follows: New England, 63 to 75. Middle Atlantic States, 66 to 90. South Atlantic States, 65 to 83. Eastern Gulf States, 69 to 83. Western Gulf States, 64 to 82. Ohio valley and Tennessee, 64 to 80. Lower Lake region, 69 to 75. Upper Lake region, 66 to 86. Upper Mississippi valley, 63 to 71. Lower Missouri valley, 60 to 79. Red River of the North Valley, 78 to 85. Texas, 66 to 82. Middle Plateau, 36 to 59. California, 43 to 59. Oregon, 74 to 83. *High stations* report the following percentages not corrected for altitude: Mt. Washington, 88.6; Pike's Peak, 60.6; Santa Fe, 55.2; Cheyenne, 56.1; Denver, 64.3.

### WINDS.

The prevailing winds at Signal Service stations are shown on chart No. II, by arrows which fly with the wind. *Westerly* winds have prevailed in the Lake region and New England; *northwesterly* winds in the Middle States; *northeasterly* in the South Atlantic and East Gulf States; elsewhere east of the Rocky Mountains they have been *northerly*, except in the Upper Mississippi valley, where they were from *northwest to southwest*.

*High Winds*.—On Mount Washington a velocity of 105 miles, NW., occurred on the 21st, and 102, NW., on the 7th and 12th. Maximum velocities ranging from 52 to 96 miles, occurred on eighteen other days; these high winds were from the northwest on all but five days, four from the south and one from the southwest. Maximum velocities exceeding fifty miles or more occurred elsewhere as follows: Kittyhawk, N. 50, on the 23rd; Cape Lookout, E. 50, on the 4th; Buffalo, SW. 52 on the 7th; Cape May, NW. 60 on the 21st; Pike's Peak, W. 70, on the 20th.

The following are the largest total movements in the various districts: Pike's Peak, 15,645. Cape Lookout, 12,763. Wood's Holl, 12,316. Indianola, 12,109. Cape May, 11,667. New Shoreham, 11,602. Mount Washington, 10,087, incomplete on account of frost-work. Sandusky, 8,976. North Platte, 8,827. Alpena, 8,202. Breckenridge, 8,112. Bismarck, 8,085. Winnemucca, 6,040. The *smallest* are: Roseburg, 1,135. La Mesilla, 1,208. Visalia, 1,580. Lynchburg, 1,722. Augusta, 2,066. Salt Lake City, 2,090. Uvalde, 2,620. Helena, 2,838. Nashville, 2,893. Leavenworth, 3,031. Springfield, Mass., 3,068.

*Local storms*, worthy of record, have been noted in connection with the various high and low areas, except as follows: A violent tornado at Keachi, De Soto parish, La., at 4:30 p. m., November 9th. Its course was from north to south, in a path about two hundred and fifty yards wide; length from eight to ten miles. On Moore's plantation, four miles distant, a gin house was blown down, killing one man and four mules. The chapel and other buildings, connected with the Baptist Female college, at Keachi, were unroofed or badly damaged; seven other buildings were torn to pieces or much damaged. In Keachi, one person was killed and nine were injured, three seriously. Serious damage was done at other places in the parish to buildings and other property. On the 13th a violent wind storm occurred in Santa Ana valley, Cal., prostrating all the wind mills and telegraph wires and delaying trains, several of which were ditched.

*Whirlwind*.—Yuma, Cal., 21st, traveling from southwest to northeast; cloud funnel-shaped, upper end lagged behind so as to incline the column about 70° from the perpendicular; cloud about ten feet in diameter and appeared to revolve from left to right.

*Sand-Storms*.—Visalia, Cal., 17th, 18th, very severe on the 19th, killing large numbers of sheep. Umatilla, Or., 7th, very severe. Near Mammoth Tank, Cal., 16th, worst ever known; stopped railway traffic for sixteen hours.

### VERIFICATIONS.

*Indications*.—The detailed comparison of the tri-daily indications for November, with the telegraphic reports for the succeeding twenty-four hours, shows the general percentage of verifications to be 85.2 per cent. The percentages for the four elements are: Weather, 89.6; Direction of the Wind, 82.6; Temperature, 87.2; Barometer, 81.0 per cent. By geographical districts they are: for New England, 82.7; Middle States, 80.4; South Atlantic States, 84.4; Eastern Gulf States, 86.6; Western Gulf States, 89.8; Lower Lake region, 86.2; Upper Lake region, 87.5; Tennessee and the Ohio valley, 86.6; Upper Mississippi valley, 84.2; Lower Missouri valley, 83.3; Northern Pacific coast region, 78.4; Central Pacific coast region, 88.0; Southern Pacific coast region, 91.7. There were 32 omissions to predict out of 3,690 or 0.87 per cent. Of the 3,658 predictions that have been made, 166, or 4.54 per cent. are considered to have entirely failed; 101, or 2.76 per cent. were one-fourth verified; 378, or 10.33 per cent. were one-half verified; 442, or 12.08 per cent. were three-fourths verified; 2,571, or 70.29 per cent., were fully verified, so far as can be ascertained from the tri-daily reports.

*Cautionary Signals*.—218 Cautionary Signals were displayed during the month, of which 190, or 87.2 per cent., were justified by winds of 25 miles per hour or over at, or within a radius of 100 miles of, the station. 68 Off-shore Signals were displayed, of which 60 or 91.2 per cent, were fully justified, and 64 or 94.1 per cent, justified as to direction. Forty-five of the Off-Shore were changed from Cautionary.